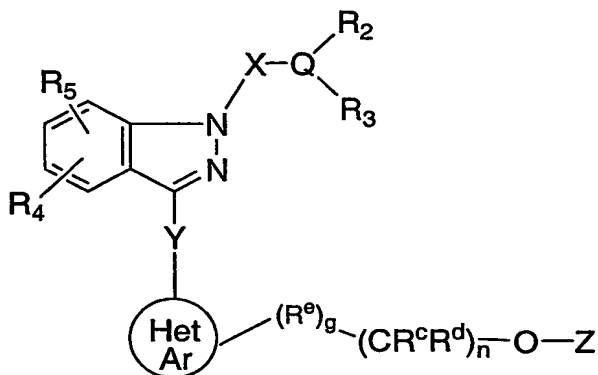


WHAT IS CLAIMED IS:

1. A compound of the structural formula I:



Formula I

or a pharmaceutically acceptable salt, *in vivo* hydrolysable ester, enantiomer, diastereomer or mixture thereof: wherein,

- 10 R represents hydrogen, or C_{1-6} alkyl;

R^c and R^d independently represents hydrogen or halo;

R^e represents N or O;

15

X represents $-(CHR_7)_p-$, $-(CHR_7)_pCO-$;

Y represents $-CO(CH_2)_n-$, CH_2 , or $-CH(OR)-$;

- 20 Q represents N, or O, wherein R_2 is absent when Q is O;

R_w represents H, C_{1-6} alkyl, $-C(O)C_{1-6}$ alkyl, $-C(O)OC_{1-6}$ alkyl, $-SO_2N(R)_2$, $-SO_2C_{1-6}$ alkyl, $-SO_2C_6-10$ aryl, NO_2 , CN or $-C(O)N(R)_2$;

- 25 R_2 represents hydrogen, C_{1-10} alkyl, OH, C_{2-6} alkenyl, C_{1-6} alkylSR, $-(CH_2)_nO(CH_2)_mOR$, $-(CH_2)_nC_{1-6}$ -alkoxy, $-(CH_2)_nC_{3-8}$ cycloalkyl, $-(CH_2)_nC_{3-10}$ heterocyclyl, $-N(R)_2$, $-COOR$, or -

$(\text{CH}_2)_n\text{C}_{6-10}$ aryl, said alkyl, heterocyclyl, or aryl optionally substituted with 1-3 groups selected from R^a ;

R_3 represents hydrogen, C_{1-10} alkyl, $-(\text{CH}_2)_n\text{C}_{3-8}$ cycloalkyl, $-(\text{CH}_2)_n\text{C}_{3-10}$ heterocyclyl, -
 5 $(\text{CH}_2)_n\text{COOR}$, $-(\text{CH}_2)_n\text{C}_{6-10}$ aryl, $-(\text{CH}_2)_n\text{NHR}_8$, $-(\text{CH}_2)_n\text{N}(\text{R})_2$, $-(\text{CH}_2)_n\text{N}(\text{R}_8)_2$, $-(\text{CH}_2)_n\text{NHCOOR}$,
 $-(\text{CH}_2)_n\text{N}(\text{R}_8)\text{CO}_2\text{R}$, $-(\text{CH}_2)_n\text{N}(\text{R}_8)\text{COR}$, $-(\text{CH}_2)_n\text{NHCOR}$, $-(\text{CH}_2)_n\text{CONH}(\text{R}_8)$, aryl, $-(\text{CH}_2)_n\text{C}_{1-6}$
 alkoxy, CF_3 , $-(\text{CH}_2)_n\text{SO}_2\text{R}$, $-(\text{CH}_2)_n\text{SO}_2\text{N}(\text{R})_2$, $-(\text{CH}_2)_n\text{CON}(\text{R})_2$, $-(\text{CH}_2)_n\text{CONHC}(\text{R})_3$, -
 $(\text{CH}_2)_n\text{CONHC}(\text{R})_2\text{CO}_2\text{R}$, $-(\text{CH}_2)_n\text{COR}_8$, nitro, cyano or halogen, said alkyl, alkoxy, heterocyclyl, or
 aryl optionally substituted with 1-3 groups of R^a ;

10 or, R_2 and R_3 taken together with the intervening Q form a 3-10 membered carbocyclic or heterocyclic
 carbon ring optionally interrupted by 1-2 atoms of O, S, C(O) or NR, and optionally having 1-4 double
 bonds, and optionally substituted by 1-3 groups selected from R^a ;

15 R_4 and R_5 independently represent hydrogen, C_{1-6} alkoxy, OH, C_{1-6} alkyl, COOR , SO_3H , -
 $\text{O}(\text{CH}_2)_n\text{N}(\text{R})_2$, $-\text{O}(\text{CH}_2)_n\text{CO}_2\text{R}$, $-\text{OPO}(\text{OH})_2$, CF_3 , OCF_3 , $-\text{N}(\text{R})_2$, nitro, cyano, C_{1-6} alkylamino, or
 halogen;



20 represents C_{6-10} aryl or C_{3-10} heterocyclyl, said aryl or heterocyclyl optionally substituted
 with 1-3 groups selected from R^a ;



Z represents $(\text{CH}_2)_n\text{PO}(\text{OR})(\text{OR}^*)$;

R^* represents hydrogen, or C_{1-6} alkyl;

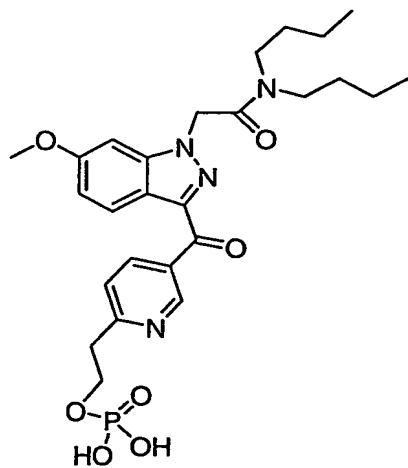
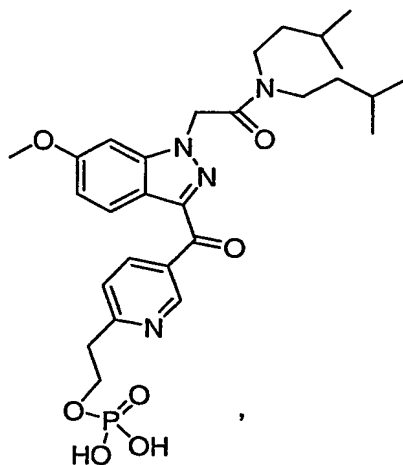
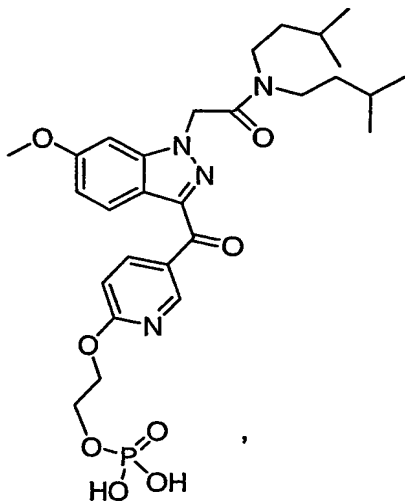
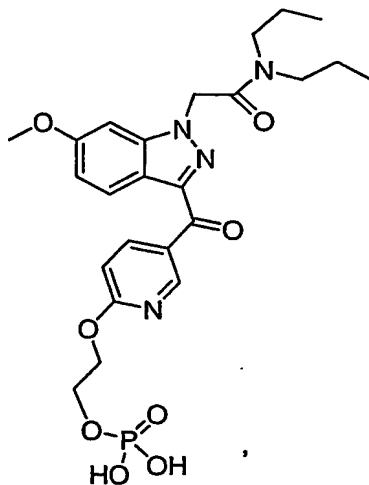
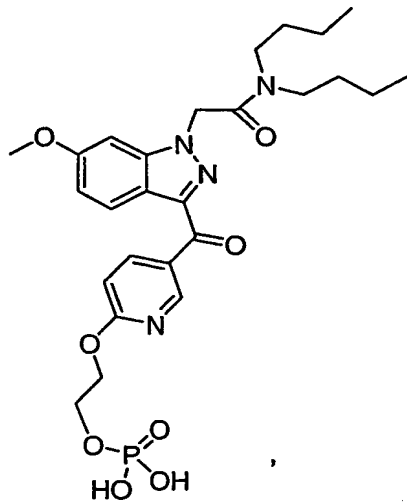
25 R_7 represents hydrogen, C_{1-6} alkyl, $-(\text{CH}_2)_n\text{COOR}$ or $-(\text{CH}_2)_n\text{N}(\text{R})_2$,

R_8 represents $-(\text{CH}_2)_n\text{C}_{3-8}$ cycloalkyl, $-(\text{CH}_2)_n\text{C}_{3-10}$ heterocyclyl, C_{1-6} alkoxy or $-(\text{CH}_2)_n\text{C}_{5-10}$
 heteroaryl, $-(\text{CH}_2)_n\text{C}_{6-10}$ aryl said heterocyclyl, aryl or heteroaryl optionally substituted with 1-3 groups
 30 selected from R^a ;

R^a represents F, Cl, Br, I, CF_3 , $\text{N}(\text{R})_2$, NO_2 , CN, $-\text{COR}_8$, $-\text{CONHR}_8$, $-\text{CON}(\text{R}_8)_2$, $-\text{O}(\text{CH}_2)_n\text{COOR}$, -
 $\text{NH}(\text{CH}_2)_n\text{OR}$, $-\text{COOR}$, $-\text{OCF}_3$, $-\text{NHCOR}$, $-\text{SO}_2\text{R}$, $-\text{SO}_2\text{NR}_2$, $-\text{SR}$, $(\text{C}_1-\text{C}_6 \text{ alkyl})\text{O}-$, -
 $(\text{CH}_2)_n\text{O}(\text{CH}_2)_m\text{OR}$, $-(\text{CH}_2)_n\text{C}_{1-6}$ alkoxy, (aryl)O-, $-(\text{CH}_2)_n\text{OH}$, $(\text{C}_1-\text{C}_6 \text{ alkyl})\text{S}(\text{O})_m-$, $\text{H}_2\text{N}-\text{C}(\text{NH})-$,

- (C₁-C₆ alkyl)C(O)-, (C₁-C₆ alkyl)OC(O)NH-, -(C₁-C₆ alkyl)NR_w(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₁-C₆ alkyl)O(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₁-C₆ alkyl)S(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₁-C₆ alkyl)-C₃₋₁₀ heterocyclyl-R_w, -(CH₂)_n-Z¹-C(=Z²)N(R)₂, -(C₂₋₆ alkenyl)NR_w(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₂₋₆ alkenyl)O(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₂₋₆ alkenyl)S(CH₂)_nC₃₋₁₀ heterocyclyl-R_w, -(C₂₋₆ alkenyl)-C₃₋₁₀ heterocyclyl-R_w, -(C₂₋₆ alkenyl)-Z¹-C(=Z²)N(R)₂, -(CH₂)_nSO₂R, -(CH₂)_nSO₃H, -(CH₂)_nPO(OR)₂, C₃₋₁₀cycloalkyl, C₆₋₁₀ aryl, C₃₋₁₀ heterocyclyl, C₂₋₆ alkenyl, and C₁-C₁₀ alkyl, said alkyl, alkenyl, alkoxy, heterocyclyl and aryl optionally substituted with 1-3 groups selected from C₁-C₆ alkyl, CN, NO₂, OH, CON(R)₂ and COOR;
- 10 Z¹ and Z² independently represents NR_w, O, CH₂, or S;
 g is 0-1;
 m is 0-3;
 n is 0-3; and
 p is 0-3.
- 15 2. The compound according claim 1 wherein p is 1-3, Y is -CO(CH₂)_n, Q is N, X is -(CHR₇)_p-, or -(CHR₇)_pCO-,.
- 20 3. The compound according claim 1 wherein Q is O and R₂ is absent.
4. The compound according to claim 2 wherein Z is PO(OR)(OR*), R₂ is C₁₋₁₀ alkyl or C₁₋₆ alkylOH, Y is -CO(CH₂)_n and R₃ is (CH₂)_nC₃₋₁₀ heterocyclyl, said heterocyclyl and alkyl optionally substituted with 1 to 3 groups of R^a.
- 25 5. The compound according to claim 4 wherein  is a 6 membered heteroaryl or phenyl optionally substituted with 1-3 groups selected from R^a.
6. A compound according to claim 5 wherein  is pyridyl optionally substituted with 1-3 groups selected from R^a.
- 30 7. A compound according to claim 1 which is in the form of a sodium or disodium salt.

8. A compound which is:



or a pharmaceutically acceptable salt, in vivo hydrolysable ester, enantiomer, diastereomer or mixture thereof.

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9. Use of a compound of formula I in claim 1 for the manufacture of a medicament for the treatment of ocular hypertension or glaucoma.

10. Use of a compound of formula I in claim 1 for the manufacture of a medicament for the treatment of macular edema, macular degeneration, increasing retinal and optic nerve head blood velocity, increasing retinal and optic nerve oxygen tension, and/or a neuroprotective effect.

11. Use of a compound of formula I in claim 1 for the manufacture of a medicament for preventing repolarization or hyperpolarization of a mammalian cell containing potassium channel or for treating Alzheimer's Disease, depression, cognitive disorders, and/or arrhythmia disorders.

12. Use of a compound of formula I in claim 1 for the manufacture of a medicament for treating diabetes.

13. A composition comprising a compound of formula I of claim 1 and a pharmaceutically acceptable carrier.

14. The composition according to Claim 13 wherein the compound of formula I is applied as a topical formulation, said topical formulation administered as a solution or suspension and optionally containing xanthan gum or gellan gum.

15. A composition according to claim 14 wherein one or more of an active ingredient belonging to the group consisting of: β -adrenergic blocking agent, parasympatho-mimetic agent, sympathomimetic agent, carbonic anhydrase inhibitor, EP4 agonist, a prostaglandin or derivative thereof, hypotensive lipid, neuroprotectant, and/or 5-HT₂ receptor agonist is optionally added.

16. A composition according to claim 15 wherein the β -adrenergic blocking agent is timolol, betaxolol, levobetaxolol, carteolol, or levobunolol; the parasympathomimetic agent is pilocarpine; the sympathomimetic agent is epinephrine, brimonidine, iopidine, clonidine, or para-aminoclonidine, the carbonic anhydrase inhibitor is dorzolamide, acetazolamide, metazolamide or

brinzolamide; the prostaglandin is latanoprost, travaprost, unoprostone, rescala, or S1033, the hypotensive lipid is lumigan, the neuroprotectant is eliprodil, R-eliprodil or memantine; and the 5-HT₂ receptor agonist is 1-(2-aminopropyl)-3-methyl-1H-indazol-6-ol fumarate or 2-(3-chloro-6-methoxy-indazol-1-yl)-1-methyl-ethylamine.

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